

## ABSTRACT

There is provided a semiconductor device having a plurality of functional units connected to each other by an internal bus, the semiconductor device including operation mode outputting means provided to each of the plurality of functional units for outputting a request of changing an operation mode at a frequency in operation to other operation mode in accordance with a data processing content, and power-execution controlling means for controlling a frequency of a clock signal and a bus operation time used by each functional unit so that a total of power consumption of the functional unit executing the processing in the plurality of functional units does not exceed a limit of power consumption provided to the semiconductor device in accordance with the request of changing the operation mode.

There can be provided the semiconductor apparatus capable of mounting a number of the functional units without using a package having a high heat radiating effect or forced cooling.